MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2022/2023

BER2094 – ENVIRONMENTAL & RESOURCE ECONOMICS

4th OCTOBER 2023
9.00 a.m. to 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of **FOUR** (4) pages including the cover page with **3** Structured Questions only.

2. Attempt **ALL** questions. All questions carry equal marks and the distribution of the marks for each question is given.

3. Please write all your answers in the Answer Booklet provided.

STRUCTURED QUESTIONS (100 MARKS)

Question 1 (50 marks)

Read **Extract 1** and answer the following questions.

Extract 1

No room for trash in Malaysia by 2050?

PUTRAJAYA: Malaysia's landfills are filling to capacity, putting the country in danger of running out of space for the disposal of solid waste by 2050.

With an average of about 38,000 metric tonnes of solid waste sent to more than 100 landfills in Malaysia daily, the authorities and operators are actively seeking solutions for a sustainable waste disposal system.

Alam Flora Sdn Bhd Chief Operating Officer Azahari Zainal Abidin said waste collected from the capital city of Kuala Lumpur alone, with about 2,500 metric tonnes of solid waste produced daily, could pile up to the height of the Petronas Twin Towers in only one week.

And the amount of waste would continue to increase in tandem with population growth, he said.

"***We must work together to reduce waste*** sent to landfills by improving the recycling rate and converting it to energy, in support of the circular economy and Sustainable Development Goals.

"If we neglect this, it will come to a point where we no longer have a place to dispose of our garbage one day. Not to mention the risks to the environment and people's health. Once a landfill is full and closed, it needs about 20 years to recover and return to its former state," Azahari said in an interview at Alam Flora Fasiliti Inovasi Kitar Semula (FIKS) here.

Among the measures that could be taken to address this are improving the country's recycling rate, building waste-to-energy (WTE) plants, and launching a trash-to-cash drive as part of waste diversion initiatives, he said.

"Imagine if all of the 100 tonnes of average daily garbage produced in Putrajaya could be processed and sent to the plant. That means zero waste from the federal administrative capital to landfills, as everything is repurposed, reused, and converted to energy.

"One of the WTE plants proposed in Melaka, a state that produces about 1,200 metric tonnes of solid waste daily, would see it generating renewable energy and providing electricity for the people there."

Continued...

Solid Waste and Public Cleansing Corporation (SWCorp) Chief Executive Officer Ismail Mokhtar said recently the relevant state governments had principally agreed on the construction of waste-to-energy plants in Rawang, Selangor, Batu Pahat in Johor and Sungai Udang in Melaka.

"Each plant would take about three years to complete. While we have landfills still in operation, we don't want to wait until they are filled to the brim before starting with projects like this.

"Where do we send the waste in the meantime? With today's engineering, waste-to-energy plants could effectively help reduce the amount of garbage sent to landfills, and protect the environment by addressing concerns with water and air pollution."

Alam Flora also developed an Integrated Recycling Facility that has an anaerobic digester facility to produce biogas, electricity and bio-fertiliser there.

"This is the practice of developed countries that we are trying to implement in Malaysia to include recycling activities in our waste management," said Ismail.

In illustrating Alam Flora's trash-to-cash motto, Azahari said FIKS received about 300 metric tonnes of recyclable and reusable waste every month; a simple calculation of RM1 per kg would mean RM300,000 is generated monthly at the facility, either through buying back items from individuals or selling back by-products such as wood chips, papers, plastics and compost to industries.

Public awareness is equally important in achieving the recycling target of 40 per cent by 2025.

Hence, Azahari said, Alam Flora has been actively engaging stakeholders, including the community, corporate sector and government agencies, to educate them on the huge potentials of waste management.

He said most Malaysians were still unaware of the high commodity value of the garbage they generated.

It was reported that Malaysia loses an estimated RM476 million every year in recyclable resources in an industry that is considered to have high value, simply because recycling practices have yet to become the norm in this country.

By Nuradzimmah Daim, Nor Ain Mohamed Radhi - March 12, 2023 @ 7:00am
Source: *https://www.nst.com.my/news/nation/2023/03/888278/no-room-trash-malaysia-2050*

Continued...

Refer to **Extract 1** and answer the following questions.

(a) Referring to the Extract 1, assess any **THREE (3)** strategies suggested by Mr. Azahari Zainal Abidin, Chief Operating Officer of Alam Flora Sdn Bhd, to address the waste reduction challenge faced in Malaysia.

(15 marks)

(b) In your opinion, why Malaysian lack in practising recycling? Choose any **TWO (2)** causing factors.

(10 marks)

(c) ***"We must work together to reduce waste"***.
Referring to the Extract 1, interpret this statement.

(15 marks)

(d) Food waste is a significant contributor to the waste issue in Malaysia. Discover **TWO (2)** ways on how can public awareness and education campaigns be improved to foster responsible food consumption.

(10 marks)

Question 2 (20 marks)

Demonstrate **FOUR (4)** factors why the cartelization of the oil suppliers has been very effective.

(20 marks)

Question 3 (30 marks)

(a) Identify **TWO (2)** significant consequences of deforestation that impact biodiversity and ecosystem health worldwide.

(10 marks)

(b) Define the Environmental Kuznets Curve (EKC). With an appropriate curve, explain the general trend with respect to economic development and environmental degradation.

(20 marks)

End of page.